From Competition to Coordination: Rethinking Post-16 Education and Training in the UK.

Industry Case Studies

James Robson,

Yushan Xie,

Mariela Neagu,

Susan James Relly

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Acknowledgements

About

This report is based on a research collaboration between the Oxford University Centre on Skills, Knowledge and Organisational Performance (SKOPE) and the Education Policy Institute (EPI).

For more information about SKOPE, see: https://skope.ox.ac.uk
For more information about EPI, see: https://epi.org.uk

About the Authors

James Robson is Director of SKOPE and Associate Professor of Tertiary Education Systems at Oxford University
Yushan Xie is a SKOPE Research Fellow
Mariela Neagu is a SKOPE Research Fellow
Susan James Relly is Head of the School of Education and Professor of Vocational Education at Adelaide University

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Executive Summary

This report presents findings from case studies of post-16 education and training (E&T) in six key industries in the UK: gaming, cybersecurity, fashion, food, automotive, and construction. The case study industries have been selected as offering critical, comparable cases. Each industry has experienced rapid change in the face of COVID-19 and is wrestling with further changes in response to Brexit, technological developments (particularly automation and AI), and the drive towards net zero. These industries offer a diverse range of roles and a number of different E&T routes and qualifications from school-to-work transitions and so provide important insight into broader issues facing E&T and the wider economy.

This qualitative study examines current skill needs and shortages in each case industry, assesses the extent to which E&T provision aligns with employer demands, and highlights other related sectoral and industry specific challenges. Interviews were conducted with a total of 60 participants, including representatives from key employers, relevant training providers, industry membership organisations, and young people. Through our analysis, we bring diverse perspectives reflecting employer, E&T provider, and young people's experiences reflecting the complex realities and E&T challenges across the UK as whole. We provide clear policy recommendations that will ensure coherent approaches to post-16 E&T policy in a way that simultaneously meets national and regional economic needs, employer skills demands, social mobility, and supports individual career aspirations.

The perspectives from the three stakeholder groups across the cases can be summarised as follows:

Employers: Employers across all six industries reported considerable and consistent skills shortages, driven particularly by rapid technological advancements and demographic shifts. They expressed frustration at perceived misalignment between post-16 E&T provision and the needs of their industries and expressed frustration at the challenge of recruiting skilled employees with appropriate technical skills, transferable skills, and workplace readiness.

Employer participants acknowledged reluctance in both their organisations and industries to actually invest in training themselves but argued funding issues were exacerbated by policy churn, inflexibility around how they could spend the apprenticeship levy, and a lack of appropriate structures for them to engage meaningfully with the E&T system. Small and medium-sized enterprises particularly emphasised difficulty in both accessing and engaging with E&T provision and felt their voices were often excluded from policy discussion and shaping provision.

All these factors were seen as hindering efforts to close skill gaps and meet shortages in a coherent manner.

E&T Providers: Representatives from E&T providers across the case study industries highlighted issues with funding in the sector as well as the challenges faced in a marketized system. This was particularly emphasised by participants in England who highlighted the damage that competition between colleges and with universities has done to the range of courses they feel they can offer

and to staff morale. Participants described how this challenging policy landscape led to prioritising student enrolment when designing courses, rather than necessarily aiming to meet labour market needs. Similarly, participants described how regulatory and funding pressures were leading to an increasing focus on more academic courses as these were often felt to be more valued and competitive, resulting in the sidelining of more vocational offerings.

Participants also reported significant struggles with staff shortages, high turnover of staff, and poor pay and conditions within the sector in general. In all our industries, participants highlighted that excellent staff could always earn more in industry than in E&T.

Participants also voiced irritation at the pressure placed upon E&T to fix a range of economic and social issues without appropriate support or funding. Similar frustration was expressed at the criticism the sector faces from employers for failing to meet skills demands despite the fact the E&T providers struggle to engage in a meaningful way with many employers, have limited collaboration, and have difficulty finding work placements and tailored training for students. They acknowledged that this means that curricula often lag behind industry needs and are unable to deal with rapid changes as information and expertise may be lacking.

Young People: Young people expressed frustration with navigating a fragmented system marked by inadequate career guidance and what was perceived as cultural biases against vocational routes. Many described being steered toward university despite seeking support on finding apprenticeships in high-demand industries like food and construction. Participants described having to fight against the perception in their schools that vocational pathways and apprenticeships are poor options compared to HE. This was compounded by significant challenges in finding clear vocational pathways, particularly apprenticeships. The young people included in this study emphasised that they found navigating the vocational system confusing and competitive. They clearly expressed the view that older, more experienced employees, university graduates and middle-class students were accessing all the best apprenticeships. They felt class and intergenerational inequalities very strongly.

They also criticised their experiences of vocational E&T curricula for neglecting both practical and relevant skills (e.g., coding) that would enable them to succeed in the work-place and commented that they would prefer to have skills that enabled them to succeed long term in their careers rather than gain short term employment.

A key finding from our interviews with young people was a feeling that their E&T experiences and their work placements were failing to support their mental health needs and special educational needs and that neurodiversity was not being appropriately accommodated in E&T and labour market settings.

Key Cross-cutting Themes

This report clearly highlights that post-16 E&T across the UK is fragmented, confusing, and hard to navigate for employers and young people alike. While there are pockets of good practice across all of the UK devolved nations, with, for example Scotland and Wales providing a more coherent and

joined up approach, the overall picture is that post-16 E&T is not working effectively for the economy, is failing to meet employer skills demands, and is leaving young people and individual learners frustrated, let down, and ill-prepared for the careers to which they aspire. At the same time, it's clear the post-16 E&T sector is stretched at best and broken at worst by the shifting sands of near constant policy reform, constant criticism from employers and policy makers for failing to meet skills needs, and the damage caused by competition and chronic underfunding. By bringing together employer, E&T provider, and young people's perspectives through the lens of industry-specific case studies, this project provides a 360-degree perspective to the issues in post-16 E&T in the UK. In doing so it highlights a need for fresh thinking and serious, strategic post-16 E&T reform. This is illustrated through the follows key issues that cut across the data and cases:

Market vs System – competition vs coordination

In our previous analysis of policy across the four nations (https://skope.ox.ac.uk/wp-content/uploads/2024/02/UK-Nations-post-16-Report-FINAL.pdf), we described the different approaches to managing post-16 E&T. For at least the last decade, England has adopted a market-based model (resulting in a quasi-market). The invisible hand of the market and competition has been seen as the mechanism for driving quality and meeting skills demands. The dominant underpinning political philosophy has emphasised the role of the state as one of market regulation. In Scotland (as illustrated by the recent Tertiary Pathfinder reports - https://www.sfc.ac.uk/skills-lifelong-learning/pathfinders/) and increasingly Wales through Medr, the Commission for Tertiary Education and Research (https://www.medr.cymru/en/), the E&T sector is conceptualised more as a system with collaboration as the primary motivator and coordination as the mechanism for improving quality of provision and meeting skills demands. The state takes on a much more coordinating role.

While we do not repeat that analysis here, these case studies further highlight the challenges faced by all stakeholders that marketisation and competition has introduced into post-16 E&T. This is particularly the case in England, but as we highlighted previously, competition remains a feature of E&T across all nations. This has led to a stretched E&T workforce feeling undervalued and underappreciated with poor working conditions and has underpinned the confusion described above over whether E&T should be prioritising serving students as consumers or employers as skills customers.

Critically, what these case studies show is cross-cutting dissatisfaction with the current arrangements and an acknowledgement from both employers and E&T providers that a market-led model and competition has proved both damaging and ineffective. There was a clear interest from both employers and providers in a more stable policy set of frameworks and a different approach to managing the sector in a more coherent and holistic way. There appeared to be real interest in a shift from competition to coordination and an approach that does not simply leave the crucial issue of skills supply and supporting individual aspirations to the invisible hand of the market. Across our data, there seemed to be a real appetite from employers and providers for the state to play a greater coordinating role in skills supply across the UK. In practice this means Scotland, Wales and Northern Ireland pushing forward with their current policy trajectories and

continuing to embed systems thinking at the heart of E&T. In England, there is a need to change the underpinning political philosophy, overtly move from market logic and take a strategic approach to holistic Tertiary Education policy (combining FE and HE within policy thinking and frameworks) and overtly shift from competition to coordination as the key underpinning principle.

Place based approaches matter

Although our case studies highlighted clear interest in system based, joined up Tertiary Education policy, it was also clear that participants did not view this through the lens of centralisation. Both employer and provider participants were overtly focused on local and regional needs and joined up working at the level of local economies. Similarly, both groups of stakeholders highlighted the importance of local geography in shaping labour markets, E&T provision, and the E&T workforce (issues in rural Wales and Scotland, for example). This all points to the need for greater place-based approaches to post-16 E&T. This might take the form of more centrally designed E&T policy frameworks, implemented at local/ regional levels, with enough flexibility to take into account place-based economic, social and geographic needs.

A better role for employers

Employers playing an active and positive role in E&T is frequently emphasised as being critical to operationalisation of successful skills systems. UK post-16 E&T, particularly in England, frequently receives criticism for failing to engage appropriately with employers and employers face criticism for failing to engage in or invest in E&T. However, our findings show that both sides of this relationship are dissatisfied with the current arrangements. It's clear that employers are keen to be more actively involved in E&T and can see the benefits. Similarly, it's clear that E&T providers are keen to bring employers much more overtly into E&T provision as well as broader skills foresighting activities. Both sides point to several key limiting issues:

- structural limitations - for example, LSIPs failing to provide a meaningful mechanism for collaboration that supports active engagement in skills provision rather than simply foregrounding the skills demands of a few select employers;
- policy issues - whereby employers have been positioned as customers of the skill system with consumer rights rather than active participants with meaningful rights *and* responsibilities in the actual provision of E&T;
- capacity issues – lack of dedicated staff to drive meaningful collaboration between E&T and employers as well as high staff turnover mean there is no sustained support structure to ensure effective engagement;
- representation – all participants raised concerns about SMEs all too frequently being excluded from E&T discussions and activities, leading to unequal employer voice and representation within E&T.

This all points to a need for fresh thinking around employer engagement, introduction of appropriate policy structures to drive deeper engagement that shifts the focus from simply skills to demands to real engagement in the process of supply, and proper investment in support structures within E&T, including more dedicated employer engagement roles.

Need for demand side interventions

Employers, E&T providers and young people raised concerns about the quality of work and particularly the long-term nature of careers. Employers and providers in particular discussed the shifting skills needs in relation to technological advancements (AI and automation) and highlighted that not enough analysis had necessarily been done on what these changing skills needs mean for the long-term careers of individuals. They acknowledged that despite demanding specific kinds of technical skills and green skills, these often relate to specific jobs (e.g. heat pump engineer) tied to wider sector or governmental agendas (e.g. decarbonisation of buildings); only limited work has been done on defining the occupational structures associated with these jobs and agendas or how they might translate into meaningful work and attractive careers. These are things that young people described as being key to their aspirations. At the same time employers acknowledged that the may not always be using new skilled workers as effectively as they should be due to issues with working practices, low skill business models, and poor absorptive capacity.

This all points to the need for overt skills demand side interventions, linked with active employer engagement in the supply side of the skills system, focused on ensuring that occupations are redesigned in relation to changes in skills demands in a way that centres long term careers and meaningful work.

Pay and conditions for E&T staff

A recurrent theme, particularly highlighted by E&T providers, was the recruitment and retention of E&T staff. A major issue emphasised was the challenge of competing with pay and conditions in industry and so ensuring staff were high quality, adequately skilled, and understand industry need. This was acknowledged by employers as well, who highlighted that recruitment and retention issues undermined efforts to build meaningful relationships between employers and E&T and sat behind the skills gaps and shortages that beset a wide range of industries. There is clearly critical work to be done on reviewing pay and conditions for staff, particularly in FE to develop a more stable E&T workforce.

Post-16 teaching, learning and curricula

Employers and young people raised concerns about the nature of teaching, learning and curricula in post-16 E&T. For employers, there was a consensus that current approaches were failing to meet their skills needs and address skills gaps and shortages. There was concern that certain technical skills were not being properly taught, there was a lack of broader employability skills being formed, and that teaching approaches were too theoretical and academic. Young people expressed concerns that they weren't necessarily getting the skills they needed for longer term careers and to navigate uncertain labour markets. E&T providers acknowledged a tension between meeting employers' skills demands (which often focused on short term job needs) and the longer-term career needs of young people. It was acknowledged that, to a certain extent,

trying to find balance was a product of a marketized system with both employers and young people positioned as consumers of the skills system.

These issues point to a need for more systems thinking and stronger engagement from employers to help navigate potential competing tensions as described above. However, it also suggests a potential need to build general employability and transferable skills into vocational curricula and reflect on whether regulatory frameworks around qualifications are foregrounding academic modes of assessment in vocational pathways. This resonates with work by NFER on the Skills Imperative (https://www.nfer.ac.uk/key-topics-expertise/education-to-employment/the-skills-imperative-2035/publications/)

Access and Navigability of the system

A major issue raised by both employers and particularly young people was how hard post-16 E&T is to navigate. This was seen as impacting all parts of the UK. Different pathways were seen as confusing and young people felt they were provided with inadequate support in their schools for navigating the vocational pathways in post-16 E&T. Issues with apprenticeships were emphasised. Several young people highlighted that the English Government's 'find an apprenticeship' site (https://www.gov.uk/apply-apprenticeship) was difficult to use, required extensive knowledge of different employers before you can search, and only provided partial results. Young people described challenges in finding apprenticeships and needing to draw on social networks and contacts to find appropriate opportunities. Employers, particularly SMEs, expressed similar concerns at navigating the system, understanding policy, and working with the apprenticeship levy. Findings highlight a clear need for a much more coherent and accessible approach to post-16 E&T and much better support structures to help employers provide opportunities and young people navigate options and find positions. There may be opportunities for cross-nation learning in this area, particularly in relation to the Scottish Funding Council's work on Regional Tertiary Pathfinders (https://www.sfc.ac.uk/skills-lifelong-learning/pathfinders/).

Inequalities

In addition to emphasising challenges involved in navigating post-16 E&T pathways, the young people in this study also expressed a view that there were profound inequalities at the heart of the system, particularly in accessing apprenticeships. Young people felt that apprenticeships were now so competitive, particularly at higher levels, that those with better connections and economic advantages were more likely to access them. They highlighted a view that people with degrees were taking up apprentice positions and members of the existing workforce with much more experience were more likely to be given opportunities. Despite policy discourses about the potential opportunities associated with good vocational E&T, young people in this study expressed cynicism at this and described feeling that vocational opportunities were being 'stolen' from them by more advantaged peers and by an older generation. It is important to note that this issue was particularly emphasised as affecting England and is less apparent in Northern Ireland where, until recently, policy approaches have emphasised the importance of prioritising

apprenticeships for young people (see https://epi.org.uk/wp-content/uploads/2025/03/School-leaving-age-report-240225-pdf-1.pdf; and https://skope.ox.ac.uk/wp-content/uploads/2024/02/UK-Nations-post-16-Report-FINAL.pdf). This highlights the need for more policy work on ensuring E&T pathways are accessible to young people and potentially introducing regulation related to widening participation in higher level apprenticeships.

Recommendations

Based on these key findings, we suggest the following recommendations. These are particularly relevant to Westminster as the English government continues to develop its post-16 E&T strategy, but some recommendations will also be relevant to Northern Ireland, Scotland and Wales, particularly as they move forward in their tertiary agendas.

Recommendation 1: Move from competition to coordination

There is a clear trajectory towards holistic, tertiary education based policy making in Scotland, Wales and Northern Ireland as well as signals of interest from the English Government in a tertiary framing. This should involve an overt shift from market logic to systems thinking and a move from competition to coordination as the mechanism for driving quality, ensuring economic needs are met, and supporting individual career aspirations. This positions devolved governments as playing a coordinating role in the process of skills supply and demand in a way that links supply side initiatives and E&T strategy, with demand side interventions and industrial strategy.

Recommendation 2: Introduce a national tertiary framework for place-based implementation

Coordination should not involve centralisation. E&T is most effective when it is rooted in regional economic and social needs and fosters local collaborations between employers and providers. Therefore, a shift to coordination should involve the development of a regional framework that can be operationalised in a way that takes into account place-based needs, contextual factors, geographies, and existing relationships. This is likely to go beyond current approaches to devolution within the UK nations and will necessitate thinking through regional boundaries based on existing relationships between FE, HE and employers. The process must avoid arbitrary separations or combinations of partners.

Recommendation 3: Develop better mechanisms for supporting meaningful employer engagement in E&T

This recommendation has three key parts:
- **Drive discursive shifts**: change the expectations placed upon employers to move them from consumers of the skills system to engaged stakeholders with rights *and* responsibilities through funding levers and incentives

- **Reform local structures**: reform LSIPs and local mechanisms that encourage collaboration between employers and E&T ensuring both stakeholders can engage in a meaningful way.
- **Invest in capacity**: provide funding to support dedicated staff, particularly in FE colleges to build local and sustained relationships with employers, cutting across multiple sectors, building on existing best practice in some parts of the sector.

Recommendation 4: Undertake an urgent review of pay and conditions for FE college staff

There is a clear urgent need to review pay and conditions for FE staff. There is significant disparity between FE staff and school teachers and poor comparison with industry salaries. This has resulted in long standing issues with recruitment and retention in the FE workforce, as highlighted by the IFS Spending Series on Education (https://ifs.org.uk/publications/annual-report-education-spending-england-2024-25) and the government's pledge to recruit 6,500 extra teachers (https://www.gov.uk/government/news/education-secretary-begins-push-to-recruit-6500-new-teachers). A review is required.

Recommendation 5: Explicitly build employability skills into post-16 curricula as part of the Curriculum and Assessment Review

Ironically, transferable employability skills appear to be overlooked in vocational E&T. They should be included in post-16 curricula and work should be undertaken to build evidence from FE on the best pedagogic approaches to ensure employability skills formation effectively takes place. This might be taken forward by the EEF as part of its post-16 agenda.

Recommendation 6: Develop stronger guidance tools for young people to find decent E&T opportunities, particularly apprenticeships and transition into vocational pathways from school

Young people have clearly described the challenge of navigating post-16 E&T, finding opportunities, particularly apprenticeships, and transitioning into vocational pathways, with limited support from school (see also work by the Careers and Enterprise Company - https://www.careersandenterprise.co.uk/evidence-and-reports/conditions-for-transition-supporting-young-people-onto-apprenticeships-and-technical-pathways-a-regional-analysis/). There is therefore an urgent need to improve career guidance on offer in schools, to improve the technical systems that enable young people to find opportunities, to develop clearer signposting for existing tools, and develop better support mechanisms for transition.

Recommendation 7: Conduct an urgent review of apprenticeship participation and introduce regulatory mechanisms to support fair access to apprenticeships

There is a clear danger that inequalities are increasingly embedded in post-16 E&T. There is therefore an urgent need to review how inequalities are being shaped and introduce regulatory

mechanisms that support fair access to E&T opportunities, particularly apprenticeships. This raises the question of whether a body like Skills England should have responsibility for fair vocational access.

Introduction

Introduction

Education and Training (E&T) across all the UK nations is at an inflection point: the sector faces significant pressure to fit into and contribute to governments' aspirations for economic growth and improved productivity; changes in skills demands are occurring rapidly as the nature of work and occupational structures and practices are changing in response to technological advancements, particularly AI; pressures of net zero goals are reshaping both work and E&T pathways; financial crises are hitting both further and higher education alike; and in many regions of the UK, the potential for social mobility appears to have stalled, entrenching inequalities and raising series questions about the social role post-16 E&T could and should play. Across all four UK nations there appears to be a desire to rethink the policy approaches taken in post-16 E&T and a discursive shift away from market-based to system-based models of governance.

As we highlighted in our earlier cross-nation policy analysis (Robson et al, 2024 - https://skope.ox.ac.uk/wp-content/uploads/2024/02/UK-Nations-post-16-Report-FINAL.pdf), Scotland (through the work of the Scottish Funding Council) and Wales (through the recently established Medr) have led the way in this policy process of moving from a market to a system. Our analysis emphasised how this can be understood as a shift from *competition to coordination* with a holistic Tertiary Education policy approach covering the whole of the post-16 sector rooted in principles of collaboration (between FE, HE and employers), cooperation, and complementarity (leading to a diverse set of E&T pathways and offerings). Across a range of publications (e.g. Ashwin et al., 2024 - https://www.hepi.ac.uk/2024/11/06/adoping-a-regional-tertiary-education-research-and-innovation-system-in-england-priorities-principles-and-practicalities/ ; Morris and Robson, 2024 - https://wonkhe.com/blogs/governing-bodies-need-to-prepare-and-plan-now-for-a-different-future/; Robson, 2023 - https://skope.ox.ac.uk/wp-content/uploads/2023/11/SKOPE-Working-Paper-skills-revolution.pdf), workshops and briefings, we have been aiming to provide research evidence to support a similar policy transition in England, arguing that tertiary based coordination should happen at regional level.

Through this report we extend this previous analysis by examining the ways in which existing challenges and changes are experienced on the ground by employers, E&T providers, and young people involved in post-16 E&T. Through detailed case studies of E&T related to six industries (gaming, cybersecurity, fashion, food, automotive, and construction) we examine the ways in which changes to vocational and occupational identities, skills demands, and patterns of work relate to post-16 E&T structures across the UK, with a particular focus on patterns of employer engagement in E&T.

The case study industries have been selected as offering critical, comparable cases. Each industry has experienced rapid change in the face of COVID-19 and is wrestling with further changes in response to Brexit, technological developments (particularly automation and AI), and the drive towards net zero. These industries offer a diverse range of roles and a number of different E&T routes and qualifications from school-to-work transitions and so provide important insight into broader issues facing E&T and the wider economy.

Methods

We adopted a two staged approach to developing these industry case studies. In the first stage, we conducted document analysis of sector, industry, and occupation specific documents at academic, policy, and course level to understand both wider discursive trends and the specific design and implementation of relevant programmes of training.

In the second stage, we conducted semi-structured interviews to build a critical understanding of each industry and its associated E&T structures and pathways. Participants included: employer representatives (HR, trainers, strategic leaders from at least two companies per industry); sector or industry bodies; E&T provider representatives involved in industry specific training; and young people involved in E&T in each industry. Across all the cases we conducted interviews with 60 participants. In each case, this consisted of: six employer/ industry representatives; two E&T representatives; and two young people. Employer and provider participants were selected purposively as individuals potentially offering key insights into the sectors they were involved in due to their roles. The young people who participated in the study were recruited through a snowballing approach, not taking into account demographic characteristics like socio-economic status, gender, race or ethnicity. The majority were currently taking apprenticeships (levels 3 and 4) in the case study industries, two had recently completed E&T. The majority were from England, although one young person was included from each of the other devolved nations. This means that the sample is not representative, and so the findings are presented as indicative with an acknowledgement of the limitations around participant inclusion.

Industry interviews focused on industry trends, changing occupational identities, labour market and E&T pathways, policy initiatives, and the relationships between skills demand and supply. Interviews with E&T providers examined industry trends, skills demand and supply, E&T pathways and their experiences. Interviews with young people focused on their E&T and career trajectories, their experiences and perceptions. The data were analysed at the level of each industry case to gain a deeper understanding of specific issues, focusing particularly on skill development, supply, demand, and deployment and broader issues. Then cross case analysis was undertaken to examine similarities and differences as part of a broader understanding of E&T and employer, provider and individual experiences across the UK. It is important to note that the study aims to span the UK, but was not designed to provide detailed comparison of differences across the devolved nations. The cross case analysis and key issues that emerged from it are presented below, divided up by participant perspectives: employers, E&T providers, and young people.

Findings

Findings

Employers Perspective

Employers across the gaming, fashion, food, cybersecurity, construction, and automotive industries consistently highlighted three interconnected challenges:

- Persistent skills gaps and shortages - skills gaps and shortages[1] driven by rapid technological advancements (particularly AI and automation) and sustainability demands were highlighted as impacting all case study industries;
- Misaligned education and training (E&T) systems - E&T provision was viewed by most employers as failing to meet ongoing and changing skill demands. Employers explicitly criticised what they viewed as outdated curricula, underfunded vocational pathways, and insufficient collaboration between E&T and industry;
- Shifting perceptions of young people about work – employers from industries like fashion and gaming valued young people's digital fluency and sustainability awareness, but across all the cases, participants raised concerns about employee readiness for work, attitudes, and professionalism toward workplace demands.

The following sections unpack these findings in more depth.

Skills shortages, gaps and recruitment

Across all six industries surveyed, employers highlight critical gaps in technical skills, transferable and broader employability skills (see also 'essential skills' as used by NFER - https://www.nfer.ac.uk/key-topics-expertise/education-to-employment/the-skills-imperative-2035/), and adaptability to evolving technological and policy landscapes.

Concerns around technical skills

The demand for technical skills is pronounced in those fast-growing, and technology-laden industries. In gaming and cybersecurity, employers reported that the demand for software developers and cybersecurity specialists has risen sharply in the digital post-pandemic era. However, the supply of skilled professionals has not kept pace with industry growth. One employer noted:

> '*It's not that skills have declined; rather, skills have stayed level while demand has increased.*' (Employer, gaming)

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[1] Note a 'skills gap' relates to a mismatch between skills and job requirements; 'skills shortages' refers to a lack of qualified workers to fill specific jobs and roles.

In automotive, the transition towards electric vehicles and digitalisation requires skills in data analysis, cloud systems, and mechatronics. Employers felt that educational institutions had been slow to introduce specialised training programmes, leading to a failure to keep up with the demand in the industry and skills shortage. Even though construction is often seen as a traditional industry, new regulations, net-zero commitments, and technological advancements have shifted skill demands from traditional trades like bricklaying and carpentry to increased focus on areas related to energy efficiency and retrofit. This has led to an increased interest in specific technical skills associated with green technologies (e.g. heat pumps were most frequently used as an example), as well as more digitally oriented ways of work (e.g. skills associated with 3D design tools). However, the workforce has been slow to adapt and there are broader concerns around whether consumer demand, particularly in relation to net zero ambitions, is strong enough to drive shifts in skills demand that some parts of the industry are predicting. As such, there is an acknowledged tension between particular policy ambitions for net zero and the reality as experienced on the ground in construction (see for example Killip and Robson, 2023).

Employers from fashion argued that the industry faces a dual challenge: declining expertise in traditional craftsmanship and a lack of proficiency in digital tools like graphic design software and material recycling techniques. This has led to consistent shortages in technical skills related to both craft and technology, particularly manifested in a lack of understanding of what it takes to translate designs into actual clothes at a practical level:

> '*I see these graduates work. They're constantly sending me CVs, and their artwork is amazing… it's a lot of hard work. But artwork does not make a garment.' (*Employer, fashion company)

The concern that there was a lack of practical technical skills associated with actually making clothes was repeatedly expressed. For example, one participant emphasised that:

> '*I've noticed a lot more of the media side is coming through… you could be a fashion media blogger but you don't know how those clothes are being made or have any knowledge at all about them.'* (Employer, fashion company)

Concerns around transferable and employability skills

While employers across all case studies tended to be most concerned about technical skills gaps, there was also a consensus across the industries for an ongoing need for transferable skills and employability skills such as problem-solving, critical thinking, adaptability, and communication. Employers from cybersecurity extended these broad skills further and argued that additional skills related to business acumen and social skills that enabled employers to develop 'trusting relationships' with clients are crucial in security-related roles. It was emphasised that often small companies in particular need someone with business experience who can do some cybersecurity in the business world rather than pure cybersecurity roles. One employer noted that it is often difficult to find employees with this range of technical, business, employability, and social skills and that current E&T approaches do not provide the breadth of skills needed by the industry.

Employers in gaming also emphasised that business acumen is important but that many young people tend to focus only on technical and artistic/ design skills, neglecting the business aspects related to product choice and product design. As one participant put it:

'It's too easy for people to forget that products actually need to make money'

This point was expanded by another gaming employer, who emphasised that employees straight out of E&T often failed to understand the business aspects of the industry:

'If you're just kind of in the door, just out of university or whatever, they don't always understand that your seniors will be looking for not only like the artistic vision of the game, but also a commercial vision in terms of producing something that we can sell.' (Employer, gaming company)

This concern was emphasised by another employer:

'So they could come with sort of some background in programme technology, that kind of thing, but you can't trust them to deliver something to put into production. The risks are too high. They just don't know how to do it… [E&T] tends to give you a good base understanding of technically how things are put together but not something at the enterprise level.' (Employer, gaming company)

In construction, employers stressed the importance of problem-solving and adaptability, particularly as the industry undergoes technological and regulatory changes and highlighted general employability skills, including communication and critical thinking, as something that they felt too many employees lacked:

'In many contexts, you have to be able to deal with people – clients, other trades, suppliers. But we're just not seeing enough people developing those basic skills… they're really important.' (Employer, construction)

In addition to these kinds of employability skills in construction, when discussing the government's net zero aspirations (particularly decarbonising buildings by 2050), some employers also discussed the importance of E&T needing to foster broader environmental values:

'They [employees] need to understand how their work fits in with the sustainability agenda. Even if they're not doing what people talk about as green jobs like installing heat pumps, a lot of them are going to be part of sites that are trying to be green… so you've got to understand things like waste, issues around energy, concrete…' (Employer, construction)

One participant described this as 'systems thinking' – a need to understand how specific jobs and activities fit into a broader project – arguing that this is increasingly needed in construction, particularly given the net zero agenda, but something that is rarely seen. They criticised existing practices as falling too much into siloed thinking characterised by a 'not my job' mentality and a tendency for workers do the bare minimum. They argued that training employees to have greater understanding of whole projects through systems thinking skills is key.

Although critical of a lack of these kinds of transferable, employability, and systems thinking skills, construction employers noted that part of the problem was linked with the fact that, in their view, many young workers and new entrants are often drawn to immediate earnings rather than engaging in long-term skill development, which prevents them from developing higher-level skills:

> *'People dropping out is a real problem. Once you start earning money, quite decent money, you don't necessarily see the point in carrying on training.'* (Employer, construction)

Similarly, employers in the food industry emphasised how important key transferable skills like teamwork and resilience are, as well as a range of broader skills like communication:

> *'Pretty much any work to do with food means working as part of a team. If you don't know how to work with other people, if you can't be part of a team, if you don't know how to communicate, you just can't succeed' (Employer, food)*

However, all participants in the food industry described struggling to attract employees with these kinds of key transferable skills. They suggested that part of the issue was a perception among potential employees and society in general that the industry has low prestige, is physically demanding, and does not necessarily have the best pay and working conditions. It was acknowledged that more work needs to be done within the industry itself to develop meaningful and attractive careers.

This concern about the provision of meaningful, long-term careers highlighted by a participant from the food industry was also expressed by other employers. Some participants from the fashion, automotive and construction industries also emphasised concerns about attracting young people and new entrants and whether current occupational structures provided sufficiently attractive career prospects. This was particularly highlighted in relation to construction where several employers discussed how the sector was under scrutiny and faced pressure from the government over the need to decarbonise buildings by 2050. However, there were concerns over whether there were really viable long term career options available:

> *'There's a lot of emphasis on green jobs and green skills, but it's hard to know what's really meant by that and it's hard to really see how some of what's being talked about can translate into attractive careers'* (employer, construction)

Broader Concerns about Recruitment

Employers across all industries highlighted significant concerns about current and future skills gaps and shortages related to an aging workface, the development of new technologies shaping jobs and the nature of work, geopolitical shifts like Brexit, and broader political challenges that might impact immigration. These intersecting concerns were raised in a variety of different ways by different employers as follows:

Technological developments: Gaming, cybersecurity, and automotive industry employers particularly emphasised technological change, AI and automation as major sources of concern for recruitment. In the automotive industry, employers highlighted the transition to electric vehicles

(EVs), which demands expertise in battery chemistry and autonomous systems, areas where E&T have been slow to adapt. In cybersecurity, demand for software developers has surged following the pandemic, but the supply of skilled professionals has not scaled accordingly. Employers emphasised that there is likely to be a need for highly skilled programmers able to work with a range of issues related to advancements in AI, particularly AI driven cyber-attacks.

Salaries and global competition: Global competition for potential employees was viewed as exacerbating recruitment issues. Several technology sector employers discussed the challenge of international competition, which provided employees with far higher salaries for skilled workers than was normal in the UK. Competing over salary, particularly in cybersecurity, was seen as a major problem for SMEs across the whole of the UK:

> *'We just need more software developers all the time, but it's hard to get good people. They go to bigger companies or try and go to the US or Australia or they work for international companies remotely because they pay much more than we ever can. We're just really hampered by low wages in this country.' (Employer, cybersecurity).*

Geopolitics: Geopolitical factors, particularly Brexit, were seen as exacerbating skills and labour shortages by reducing the availability of migrant and seasonal workers who historically filled crucial roles in industries like agriculture, food, and construction. An aging workforce was seen to exacerbate the issue:

> *'I know it's been in the news a lot, but it needs to be said, we've lost a lot of decent brickies since Brexit, and others are retiring, and we just don't have enough young people coming in now… where are they going to come from'* (employer, construction

Working conditions: fashion, food, agriculture, and the automotive industry faced additional challenges. These related to the changing perceptions of employment whereby young people prioritise job security, flexibility, fair wage, and meaningful work, making some areas with rigid structures or physically demanding work difficult to attract employees. Fashion industry employers emphasised problems with struggling with job insecurity, zero-hour contracts, and low wages, leading many young workers seek employment in sectors with better financial stability and structured HR support. Similarly, in the automotive industry, the lack of flexibility was highlighted as a known barrier for the recruitment of women and for the diversification of the workforce:

> *'There's things around ways of working and as an industry we're really not good around flexible working, which disproportionately affects women. And so, you know, I tracked it, but we've got big aims in terms of gender parity. But it's very difficult when women continue on the whole to be the primary carer. I know it's changing, but we're still in that situation. If you're not offering flexible working then it makes it a lot more difficult. You know there are still parts of the automotive industry that work 40-hour a week, the motorsport industry is 40-*

hour week. That plus little flexibility is quite a difficult package. It's a massive issue.' (Talent acquisition manager, automotive company)

In food and agriculture, unattractive working conditions, low pay, and inflexible schedules deter potential young workers. According to employers in the UK, unlike in Europe, jobs in hospitality and food service are not widely regarded as viable long-term careers in the UK, resulting in a low uptake of relevant training programs.

Perceptions of E&T provision

Employers across all case study industries expressed frustration with a perceived disconnect between E&T provision and their actual workforce demands. Across our interviews, there was consensus that this misalignment stems from several key issues: curriculum design; approaches to E&T delivery; the role of employers in E&T and employer engagement; industry adaptability and absorptive capacity; and policy churn and complexity.

Curriculum design: Many participants linked skills misalignment with weaknesses in the curriculum. In cybersecurity, for instance, where there is a particular focus on graduate level skills, universities were seen as placing too much emphasis on high-profile areas such as ethical hacking, despite limited demand for these skills in business settings. Rather, employers argued they urgently needed professionals who could translate technical risks into business practices as described above. As one cybersecurity employer put it: '*The universities are just behind on this*'.

Similarly, in fashion, there was a strong view among employers that E&T provision has skewed the type of skills they focus on to attract young people, such as 'fashion design'. This has resulted in neglecting practical skills in manufacturing, production, and quality control. Employers explicitly complained that new workers coming into the industry were capable of producing impressive artwork but lack practical knowledge of garment construction or factory workflows. The food industry employers highlighted a similar issue, feeling that current E&T provision across the UK as a whole tends to offer courses that prioritise generic hospitality management rather than courses that meet emerging sector and industry needs, like automation in food processing, system design as well as soft skills highlighted above. One participant particularly emphasised a lack of E&T curricula that included meaningful content on sustainable food production, regenerative farming, or agroecology:

> *'Whatever part of the industry you're in, you really should know something about the basics of where the food comes from, how it's produced… you don't need to be a farmer but you should understand something about the food system because you're part of it'* (employer, food)

Automotive industry employers also noted problematic lags in curriculum design. There were numerous concerns about a lack of content being taught relating to electric vehicle maintenance and battery management systems.

'EVs are the future, you know. They should sit at the heart of what the industry does. If we don't get more people in who understand them, we're going to have real problems really quickly.'
(Employer, automotive)

However, participants in automotive also raised concerns about fundamental issues in current curricula, highlighting a concern that basic issues, for example relating to hydraulics and pneumatics, are not being taught properly or given enough curriculum time. It was also highlighted that it was hard to differentiate between issues with the curriculum and issues with finding good teaching staff able to teach these fundamental topics.

E&T Delivery: Although the majority of employers we interviewed across all industries were not particularly familiar with ideas around pedagogy and best practice in teaching and learning, many underscored a general feeling that approaches taken to teaching and learning across all post-16 E&T were not adequately meeting labour market needs. This was expressed as a perceived lack of practical, hands-on experience, which has been replaced by too much theoretical instruction. It is important to note that most criticism was targeted at universities and undergraduate degrees. For example, participants from the automotive industry were critical of engineering graduates arguing that the approaches taken by universities meant that graduates lacked exposure to essential practical skills due to under-resourced universities. A 'talent acquisition manager' described this issue:

'I know it's true of a lot of jobs, but in engineering and in STEM in particular, you really need that experience. But where do you get that experience from when you have a lot of universities that have closed their labs. So, you're not exposed to the practical side in universities, how do you build up your skills […]' (Talent acquisition manager, automotive)

However, across the case studies, participants were also critical of E&T delivery in vocational pathways as well. There were concerns that even FE colleges were focusing too much on academic issues and theoretical rather than practical discussions. Concerns were raised that this was reflected in assessment criteria:

'They have to write these enormous reports and it's all about demonstrating knowledge but it should be about demonstrating competency' (employer, food discussing level 3 pathways)

Several participants were critical of a range of apprenticeships and the college-based element of teaching they received. For example, an employer from gaming expressed frustration:

'I'm really supportive of apprentices. I think they're great. But, you know, they disappear to college for like a day a week and I struggle to really see much connection with what they do there and what they do with us. It's just time lost when they could really be learning useful things on the job' (Employer, gaming)

Role of employers and engagement: Employers across all industries described facing significant challenges in collaborating effectively with E&T providers. It was felt that an inability to meaningfully engage in E&T was a fundamental issue that was undermining efforts to align skills development with industry needs. In England, Local Skills Improvement Plans (LSIPs), designed to

foster cooperation between training providers and employers, were generally viewed with scepticism:

> *'I get what they're trying to do with LSIPs but there's not really enough real discussions between us and the local college or the university. Not much we say has actual impact on the ground… they're [LSIPS] just a bit too far removed.'* (Employer, automotive)

Concurrently, several participants highlighted that national mechanisms for employers to engage in the E&T system, like the Institute for Apprenticeships and Technical Education (IFATE, now absorbed into Skills England) all too often ostracise SMEs and tend to be dominated by a few key, powerful companies. Employers from food and construction also suggested that sector-specific umbrella organisations, such as the Food & Drink Federation and the National Federation of Builders and the Construction Industry Training Board (CITB), also often fail to incorporate the voices of SMEs which are seen as particularly important in these industries.

At a local level, employers frequently reported difficulties in building partnerships with E&T providers, suggesting that high staff turnover in colleges underpinned poor relationships and a lack of responsiveness. High churn rates for E&T staff were particularly emphasised as weakening relationships with employers and was a source of frustration for many employer participants who described losing contacts and having to regularly attempt to rebuild relationships from scratch:

> *'we have to knock on their door repeatedly to say, 'These are the skills we need, can you develop programmes to help us?''*

Several employers in agriculture and food processing described attempting to engage with local FE colleges for work experience placements but '*struggled to even find the right contact person'*.

Adaptability and absorptive capacity: As mentioned earlier, many industries feel that E&T provision, as well as the industries themselves are not evolving quickly enough to keep up with changing skills demands in relation to technical advancement, digital era, and policy changes. Employers from cybersecurity, for example, emphasised that the industry requires continuous investment in training due to the ever-changing nature of cyber threats, as described by one recruiter: '*It costs pennies to launch a cyber-attack but millions to defend against it.*' Despite some efforts to introduce cybersecurity apprenticeships, pathways between further education, higher education, and industry remain fragmented. Similarly, in the automotive sector, the shift towards digitalisation and electrification has created new skills demands, particularly in mechatronics and electronic engineering. The automotive sector faces similar challenges as it transitions toward digitalisation and electric vehicles (EVs). Employers report urgent demand for skills in mechatronics and electronic engineering to support EV production, but universities have been slow to introduce specialised courses. In construction, new regulations such as the Building Safety Act (2022) and net-zero commitments have shifted skill demands from traditional trades like bricklaying to energy-efficient retrofitting and compliance expertise, which have not been effectively addressed in E&T provision, at policy level, or within the industry itself:

> 'There's really very little or no long-term strategic thinking about future skills needs, particularly in relation to ground societal challenges like climate change. So, the whole

thing is predicated on what might be need in six months or 12 months' time. Not that the government is saying that in 10 years' time there will be no more gas boilers. All the people who've got jobs, fitting gas boilers need to retrain in fitting something else.' (Employer, construction)

The sense of dissatisfaction across all case study industries was palpable with frustration at the lack of adaptability, flexibility, and agility within E&T provision. However, some also acknowledged that employers themselves were often slow to change practices. While industry representatives emphasised the need for particular emerging skills, several participants acknowledged that they might not actually deploy them effectively.

> *'I know I've been talking a lot about EVs, mechatronics, battery management, everything like that, but I also know that plenty of companies are slow to change what they do… we say we want this as an industry, but that means changing some of what we do as an industry and that means some people [businesses] need to get better at changing themselves'* (employer, automotive)

The ability of businesses to deploy new skills effectively is often linked to their absorptive capacity. This refers to an organization's ability to recognize, assimilate, and apply new knowledge and skills for innovation and competitive advantage. It involves the ability to adapt to external changes effectively and incorporate new skills, knowledge, and practice. Poor absorptive capacity is often linked with poor productivity and poor economic growth. It is notable that several employers highlighted absorptive capacity as an issue within their industries.

Policy churn and complexity: Not all participants felt comfortable talking about E&T policy and stated that they found it confusing, messy and hard to navigate. However, there was consensus that policy instability across all four nations for the last two decades has exacerbated skills shortages and gaps:

> *'Everything just seems to be changing all the time… it's really hard to get a handle on what the government's doing or even trying to do.'* (Employer, food).

The apprenticeship levy in England faced particularly criticism across all case study industries for being unsuitable for SMEs.

> *'SME's struggle with the administrative burden of the levy. It's way too complicated to really get anything out of and the structure just isn't always right for the kinds of things that we often need.'* (Employer, construction).

Perceptions of the emerging workforce

The majority of participants were particularly keen to discuss young people and new entrants to the workforce. This usually took the form of a set of complaints and concerns about young people's attitudes towards work, a perceived lack of professionalism, motivation, and commitment.

In the food industry, for example, some employers explicitly worried about the reliability of young workers, fearing attendance issues and a reluctance to engage with the workload required for success. Additionally, some employers were critical of young people's interest in environmental, social, and governance (ESG) issues. Some participants even questioned whether these values could ever align with the demands of the workplace.

In construction, several employers raised concerns about insurance risks for younger workers and complained about negative attitudes of young workers, disinterest in the work and E&T, and issues around distractions, particularly from mobile phones. It was emphasised that these perceived issues actively deter employers from taking on 16-18-year-olds and even young people below the age of 25. While employers all agreed that young people need more hands-on experience, the hesitation to invest in such opportunities clearly remains a significant barrier and a clear policy paradox.

In some ways, these issues can be viewed as a typical intergenerational concern about youth, linked with broader moral discourses in society (e.g. about mobile phones), and part of a broader set of concerns over skills provision and a lack of employability skills described above. However, we have included them in this section as such concerns sit in notable opposition to intergenerational concerns the young people we interviewed raised about their employers and the sense that the best E&T opportunities were being 'stolen' by an older generation (see below).

It is also important to note that perspectives vary across employers and industries. In the gaming and fashion sectors, some employers acknowledged young people's strengths, such as digital fluency and creativity. Gaming studios particularly value their intuitive understanding of gaming culture and programme technology. Fashion employers also praised younger workers' awareness of sustainability, aligning with industry shifts toward ethical practices.

E&T Providers Perspective

This section examines the perspectives of education and training (E&T) providers across the six industries and highlights their challenges in addressing skills shortages and aligning curricula with industry needs. E&T providers face a dual challenge: meeting employer demands for practical, industry-relevant skills while attracting students with engaging and appealing courses. However, structural barriers, such as funding constraints, policy instability, and staff shortages, hinder their ability to bridge these gaps. Collaboration with employers was viewed as being hampered by rigid funding models and the dominance of large firms, which leaves SMEs underrepresented. Additionally, policy churn and pay disparities between industry and teaching roles were emphasised as exacerbating recruitment and retention challenges. Despite these obstacles, innovative partnerships, such as cybersecurity masterclasses in Wales, were used as important examples to demonstrate the potential for effective collaboration when stability and trust are prioritised.

E&T providers' perspective on employer engagement

From the perspective of E&T providers, engaging with employers to develop relevant, industry-aligned curricula remains a complex and frustrating process. Across the case studies, E&T provider participants emphasised the following key points:

Tension between industry needs and student interests: One of the key issues that E&T providers face is the pressure to meet the demands of both students and employers. Participants described a clear tension between what employers want and what students are interested in. As highlighted above, employers in cybersecurity critiqued some training providers for focusing on '*trendy areas like ethical hacking*' as these were seen as attractive to students. However, some participants pushed back on this, arguing that:

> '*attracting students matters… they're giving their time to this, some are giving their money it's OK to teach them things that they're interested in, that's going to get them excited*' (E&T, cybersecurity)

Similarly, in fashion, a provider made similar points arguing that artistic abilities, digital fluency, and sustainability awareness are appealing to students, while hands-on craftsmanship, such as pattern-making, receives less interest. This reflects the recurring issue in the tension between industry needs and student expectations alongside the difficulty E&T providers face when trying to balance the need to engage students with offering training that directly meets the evolving demands of industries.

This issue was particularly raised in relation to England and reveals the inherent tensions in a quasi-marketised system where it is not entirely clear who is the customer – employers or students. Although, the message was not consistent across all industries, several E&T provider representatives made the point that employer skills demands are all too often linked with meeting short term demands of a specific job at a specific time, while young people are hoping to be trained for a long term career.

I want to be helping people develop careers. That's what the majority of the young people I work with want too. They want good jobs now, but they want skills that will last and help them longer term. I'm not sure that's always what employers want. You know, there's this big push for something or other… loads of publicity, maybe the minister gets involved, but then by the time you've trained someone, employers don't care about those skills anymore. They've moved on. (E&T, cross-case participant)

This illustrates how employers' skills demands can often sit at odds with employee career needs. E&T sits at the heart of this uncomfortable tension and providers were acutely aware that they face significant criticism if they fail to balance these two different sets of needs appropriately.

Building on each other's expertise: The engagement between employers and E&T providers was described as hampered by structural and financial barriers. Many training providers across all industries faced challenges in engaging with SMEs. Small employers were seen as less likely to participate in partnerships due to limited resources, making it harder for colleges to provide tailored training opportunities. Additionally, it was acknowledged that large employers often dominate the conversation, leaving smaller businesses feeling sidelined and unable to engage meaningfully in skills development. Moreover, funding cuts have strained the capacity of FE colleges, limiting their ability to make and maintain connections with employers, exacerbating tensions around engagement.

However, some positive examples of effective engagement were provided. In Wales, for instance, a positive collaboration between companies and FE colleges in cybersecurity was described. To address skills shortage, companies have worked together to share expertise, rather than '*stealing each other's people'*. Through partnerships with local FE colleges, these businesses have provided regular masterclasses, work placements, and competitions for students, creating a strong bond between the two sectors. This collaboration was highlighted as fostering trust, resulting in the upskilling of the workforce and increased the attractiveness of cybersecurity courses to students, including a noticeable rise in female participation.

Criticism towards policies: Finally, the role of Local Skills Improvement Plans (LSIPs) was critiqued by E&T providers. While LSIPs were introduced to foster stronger partnerships between employers and education providers at a local level, many found them to be ineffective. The process is often seen as a top-down approach, with funding tied to rigid conditions that do not allow for genuine collaboration. There is a widespread sense that the idea of placing employers in the 'driving seat' of education reform is naive, as it fails to account for the complex realities of course design, funding constraints, and the need for long-term investment in both education and infrastructure.

Staff recruitment and retention

Staff recruitment and retention were universally highlighted as significant challenges for E&T providers. This cut across major concerns about salary, working conditions, and opportunities for continuing professional development. A key issue consistently raised was the imbalance in pay between industry roles and teaching positions. This is especially pronounced in sectors like cybersecurity and other digital areas, where the higher wages offered by industry make it difficult

for E&T providers to attract and retain qualified staff. However, in industries like construction and food, the same concerns were raised – that it was hard to persuade staff to engage in E&T given the low rates of pay compared to industry roles.

In the automotive sector, the shortage of qualified lecturers was emphasised as a rapidly a growing issue, especially for technical subjects such as hydraulics and pneumatics. E&T providers described significant struggles in finding qualified individuals to teach these courses, exacerbating the existing skills gap in the industry. This shortage of teaching staff was explicitly tied to the inability of colleges to compete with industry wages, leaving many colleges unable to deliver the practical, industry-relevant training that students need:

> *'So, there is a massive skills gap and the other big issue linked with the skills gap is even basic things like hydraulics and pneumatics. You will struggle to find further education colleges where they might have the equipment, but they're really struggling with lecturers. So, every single College in the northeast and there's lots of them, are really struggling to find the people who can teach those topics.'* (E&T, automotive)

In rural areas, the geographic distribution of the population was also highlighted as complicating recruitment, particularly in industries like agriculture and food production. High land prices, lack of high-quality housing, and poor public transport make it difficult to attract workers and training staff to remote locations. In Scotland and some parts of Wales, the rural landscape was also emphasised as presenting a significant additional barrier not only to recruitment but also to consistent training provision, as training providers struggled to justify the cost of running courses in sparsely populated areas:

> *'We basically look after a network of training providers who deliver accredited courses and one of the challenges [is that] there aren't necessarily enough people in the remote areas needing training regularly enough to warrant people running businesses. So it's kind of how people maybe take on training roles alongside other jobs and see the value of doing that as well. But it can become expensive to maintain that level as well.'* (E&T, agriculture)

The impact of policy churn on E&T provision

As highlighted in our previous report from this project (Robson et al., 2024), policy churn and instability around qualifications have been significant challenges for E&T providers, leading to confusion and uncertainty and exacerbating recruitment and retention issues. All participants emphasised a feeling that frequent policy changes have significantly hindered the ability of providers to deliver consistent, long-term training solutions.

In the food industry, policy changes have caused some confusion, particularly regarding qualifications. Employers have raised concerns that students taking T Levels do not possess the same practical knowledge and skills as those completing apprenticeships, leaving E&T providers uncertain about how well these students are being prepared for the workforce. The increasingly complex landscape under contradictory stressors such as food security and sustainability has made the situation more complicated. Similarly, construction training providers described facing

uncertainty and challenges as policy changes around net-zero and Building Safety Act (2022) complicate E&T providers' understanding of qualifications and disrupt industry alignment. The automotive industry similarly described struggling with policy churn for decades, with frequent changes failing to meet sector needs:

> *'Well, it seems like this has been, we've been kind of going in circles, you know trying all the time. You know there has been a lot of policy initiatives and not really getting the expected outcomes and I think that's because we're making education a political thing […]* (E&T, automotive company)

Across almost all the E&T provider participants there was a feeling that, particularly in England, policy instability and the market-based approach to managing post-16 E&T had resulted in confusion and fragmentation. Competition, for students and resources was viewed as damaging the coherence of provision and the ability for meaningful relationships between providers and employers. All of this meant that the expectations placed upon E&T to meet both the economic needs of the country and the career and broader social needs of individuals cannot be adequately met.

Young People's Perspective

This section examines the perspectives of young people regarding their experiences of E&T, including career guidance and how E&T has interfaced with the workplace. It highlights the challenges they face in navigating career pathways, including limited guidance from schools, lack of information about apprenticeship opportunities, and a cultural bias that favours higher education over vocational routes. It also explores the growing disillusionment with vocational pathways as a means of social mobility, the shift in perceptions of apprenticeships, and the need for more inclusive support, particularly for neurodiversity and mental health. The section underscores the need for a more integrated, accessible, and supportive E&T system. As indicated in the introduction, this section is based on the views of 12 participants and so provides an indicative, rather than representative, overview of opinions and issues raised. Given that most of the young people who participated in this study were based in England, the findings in this section are particularly relevant to the English post-16 E&T context.

A gap in career support in schools and navigational struggles in the E&T system

Although this project was focused on post-16 E&T, the young people who participated in this study were keen to discuss their experiences at school before and up to 16. This illustrates the interconnected nature of the different parts of schools and E&T systems. Career guidance in schools and the wider E&T system were highlighted as key challenges for young people in navigating their future careers. Many students and trainees reported that they were left to conduct their own research to discover apprenticeship opportunities and vocational pathways, as their schools had failed to provide sufficient information or highlighted alternative routes to university, such as apprenticeships or wider vocational options. Schools were seen as prioritising academic routes in order to maintain their reputation and funding leading to a lack of structured support and students feeling disconnected from vocational pathways. For instance, a participant in construction, described feeling that apprenticeships were not adequately promoted in their schools, leading them to miss valuable opportunities.

> *'I wish someone at school had really talked to me about apprenticeship options. I've got one now, but it took much longer than it should have for me to realise it was there and get one. If anyone at school had helped I would be much further along now.'* (Young person 4)

By ensuring that career guidance is more inclusive of vocational pathways and simplifying the navigational process within the TVET system, students would be better equipped to make informed choices and successfully transition into careers that align with their interests and skills.

Ultimately, students advocated for a curriculum at school that offers more practical and relevant skills, such as digital literacy, coding, public speaking, and tax returns, to better prepare them for the workplace:

> *'There's so many things that schools aren't teaching you because in my experience schools just want you to pass exams. They don't really give too much thought to how you develop as*

a person and your future prospects. I mean, my school told me not to do an apprenticeship, which is quite crazy in my opinion. They said I should stay and do A levels instead. […] Why teach maths when you could teach coding? Because any maths I do in my job, I'd do it through Python even if it's basic stuff because things work easier when you can code them […].' (young person 1)

'I remember I mean I left school in June, July and I was I was working this apprenticeship in September and I had my first pay check come in and I was very terrified for about a week because I didn't know if I'd pay my taxes or not. And I was worried I was committing tax fraud or something like that. And I did some research, found out, luckily, I wasn't. It was being paid before it got to me. I found out while I'm in that situation, I should be, you know, told way before it's actually a probable thing.' (Young person 2)

This perceived lack of guidance was seen as being compounded by significant navigational challenges within the E&T system itself. Apprenticeships are often competitive and difficult to find and even harder to secure, with students having to manage the process themselves, from researching available positions to attending multiple interviews. The fragmented and complicated nature of the system makes it difficult for students to access relevant information, and the absence of decent platforms leaves them uncertain about where to find apprenticeship opportunities.

There was a strong consensus, particularly among participants from England, that the government's 'Find an Apprenticeship' site (https://www.gov.uk/apply-apprenticeship) is inadequate, hard to navigate and requires existing knowledge of which potential employers to search for:

'I was looking for apprenticeships all last week online. The site [find an apprenticeship] was like only showing 30 results with no filters on, then it would show 44000, then none. It's terrible. Someone told me I should just go through an agency' (Young person 5)

There was a strong call for a better quality, unified platform where all apprenticeship opportunities are accessible by location, level and type, to make it easier for students to find suitable positions. This would also help bridge the gap between regions with different levels of opportunity.

Disillusionment with E&T as a pathway for social mobility

Importantly, for the young people we interviewed, there is growing disillusionment with vocational pathways as a vehicle for social mobility, with many young people questioning the value placed on E&T and apprenticeships, especially given the increasing cost of living and regional disparities and inequalities. One participant shared that apprenticeships, once seen as a golden opportunity for social advancement, are now viewed by them and their peers as contributing to a widening gap between students from different backgrounds. The young people

we interviewed were well aware of trends within data that key apprenticeships were being taken by individuals from more privileged backgrounds and even by people who had already received degrees. This was particularly seen as impacting degree apprenticeships which were viewed as highly sought after:

> *'I know like apprenticeships were really good for poorer people, but now they're really hard to get and they're being taken by people who've got degrees already and the best ones [apprenticeships] are going to those [people] who have got degrees, been to university… so it's really hard… there's like hundreds of applications for each one'* (young person 5)

Similarly, as referred to above several young people noted that apprentices tend to be older than they once were, as those who succeed often have more experience and are better equipped to pass interviews. Given the potential for recouping the apprenticeship levy, many companies now put their employees through higher degree apprenticeships as an approach to CPD. Several participants were aware of this trend and expressed a view that their futures were being 'stolen' by the older generation:

> *'They're [older workers] are literally stealing them [apprenticeships]. They've got jobs. They [apprenticeships] should be for young people like 18 year olds, you know, not people who basically know it. Like how can we compete with people like that… I really wanted a degree apprenticeship but no change'* (Young person, 4)

However, this view that potential pathways into work and a better future were being limited also sat in tension with the common and recurring theme that apprenticeships are 'less than' university degrees. As has been highlighted across many studies, for many, including parents and teachers, university degrees remain the gold standard, and vocational pathways are seen as a fallback (James Relly, 2021). This is a difficult space for young people to navigate and reconcile their own aspirations and desire to gain work-relevant qualifications with a societal perception of failure:

> *'I think it's definitely like a cultural thing […] apprenticeships are kind of seen as less than a university degree by a lot of people and like parents and teachers. Like I remember I was considering apprenticeships or like a gap year placement or something.'* (Young person 2*)*

Lack of support for mental health and neurodiversity in education and employment

A slightly surprising finding from this study was the emphasis that participants put on issues related to mental health and neurodiversity. Despite growing awareness of these issues, the E&T system, along with the labour market, were viewed as often failing to adequately support neurodiverse individuals or those with mental health needs. Participants flagged that many young people with conditions like autism find job interviews particularly challenging, both in person and online, due to difficulties such as making eye contact or understanding questions clearly. Some prefer written interviews, while others struggle to ensure they've interpreted the questions

correctly if the interview was not held in-person. Several participants disclosed having these experiences and feeling poorly supported. Given the centrality of interviews to the young people who participated in this study, particularly in trying to gain apprenticeships, many expressed a desire for interview settings to be more comfortable and human-centred, such as offering relaxed environments with comfortable seating.

Similarly, participants felt that E&T, while aiming for inclusivity, often lacks the flexibility needed to accommodate neurodiverse students, resulting in many leaving without progressing into stable employment. Additionally, young people with special educational needs highlighted that they often find it hard to focus for extended periods, limiting their work opportunities. They suggested more part-time work and online E&T options outside of traditional college settings to better cater to their needs and reduce the risk of economic inactivity.

The lack of adequate mental health support in both E&T and the work-place was also emphasised. The gap between the services provided by CAMHS (Child and Adolescent Mental Health Services) and the actual needs of young people was a key concern, especially exacerbated by the pandemic and cost-of-living crises. One participant shared their frustration with the mental health support offered by their employer, describing the provision of monthly mental health boxes, which contains tools like cognitive behavioural therapy kits and aroma therapy sets, as ineffective and a waste of money. They expressed a sense of generational disconnect, feeling that older individuals struggle to understand and empathise with the mental health challenges faced by young people, particularly those with neurodiverse conditions.

Conclusion

Conclusion

This report illustrates how post-16 E&T across the UK is fragmented, confusing, and hard to navigate for employers and young people alike. While there are pockets of good practice across different devolved nations and in certain regions of England, the overall picture is that post-16 E&T is not working effectively for the economy, is failing to meet employer skills demands, and is leaving the young people who participated in this study feeling frustrated, let down, and ill-prepared for the careers to which they aspire. At the same time, it's clear the post-16 E&T sector is stretched at best and broken at worst by the shifting sands of near constant policy reform, constant criticism from employers and policy makers for failing to meet skills needs, and the damage caused by competition and chronic underfunding.

These are not new findings and a significant amount of research, including our previous report from this project (Robson et al. 2024 - https://skope.ox.ac.uk/wp-content/uploads/2024/02/UK-Nations-post-16-Report-FINAL.pdf), has highlighted these issues. However, by bringing together employer, E&T provider, and young people's perspectives through the lens of industry-specific case studies, this project has provided a 360-degree perspective to the issues besetting post-16 E&T in the UK. In doing so it adds a sense of urgency and points to a critical need for fresh thinking and serious, strategic post-16 E&T reform. Our cross-case analysis foregrounds the following key issues:

Market vs System – competition vs coordination

In our previous analysis of policy across the four nations (https://skope.ox.ac.uk/wp-content/uploads/2024/02/UK-Nations-post-16-Report-FINAL.pdf), we described the different approaches to managing post-16 E&T. For at least the last decade, England has adopted a market-based model (resulting in a quasi-market). The invisible hand of the market and competition has been seen as the mechanism for driving quality and meeting skills demands. The dominant underpinning political philosophy has emphasised the role of the state as one of market regulation. In Scotland and increasingly Wales through Medr, the Commission for Tertiary Education and Research (https://www.medr.cymru/en/), the E&T sector is conceptualised more as a system with collaboration as the primary motivator and coordination as the mechanism for improving quality of provision and meeting skills demands. The state takes on a much more coordinating role.

While we do not repeat that analysis here, these case studies further highlight the challenges faced by all stakeholders that marketisation and competition has introduced into post-16 E&T. This is particularly the case in England, but as we highlighted previously, competition remains a feature of E&T across all nations. This has led to a stretched E&T workforce feeling undervalued and underappreciated with poor working conditions and has underpinned the confusion described above over whether E&T should be prioritising serving students as consumers or employers as skills customers.

Critically, what these industry case studies show is dissatisfaction with the current arrangements and an acknowledgement from both employers and E&T providers that a market-led model and competition has proved both damaging and ineffective. There was a clear interest from both employers and providers in a more stable policy set of frameworks and a different approach to managing the sector in a more coherent and holistic way. There appeared to be real interest in a shift from competition to coordination and an approach that doesn't simply leave the crucial issue of skills supply and supporting individual aspirations to the invisible hand of the market. Across our data, there seemed to be a real appetite from employers and providers for the state to play a greater coordinating role in skills supply across the UK. In practice this means Scotland, Wales and Northern Ireland pushing forward with their current policy trajectories and continuing to embed systems thinking at the heart of E&T. In England, there is a need to change the underpinning political philosophy, overtly move from market logic and take a strategic approach to holistic Tertiary Education policy (combining FE and HE within policy thinking and frameworks) and overtly shift from competition to coordination as the key underpinning principle.

Place based approaches matter

While clear interest in system based, joined up Tertiary Education policy was evident in the data, it was also clear that participants did not view this through the lens of centralisation. Both employer and provider participants were focused on local and regional needs and joined up working at the level of local economies. Similarly, both groups of stakeholders highlighted the importance of local geography in shaping labour markets, E&T provision, and the E&T workforce (issues in rural Wales and Scotland, for example). This all points to the need for greater place-based approaches to post-16 E&T. This might take the form of more centrally designed E&T policy frameworks, implemented at local/ regional levels, with enough flexibility to take into account place-based economic, social and geographic needs.

A better role for employers

Employers playing an active and positive role in E&T is frequently emphasised as being critical to operationalisation of successful skills systems. UK post-16 E&T, particularly in England, frequently receives criticism for failing to engage appropriately with employers and employers face criticism for failing to engage in or invest in E&T. However, our findings show that both sides of this relationship are dissatisfied with the current arrangements. It is clear that employers are keen to be more actively involved in E&T and can see the benefits. Similarly, it is clear that E&T providers are keen to bring employers much more overtly into E&T provision as well as broader skills foresighting activities. Both sides point to several key limiting issues:

- structural limitations - for example, LSIPs failing to provide a meaningful mechanism for collaboration that supports active engagement in skills provision rather than simply foregrounding the skills demands of a few select employers;

- policy issues - whereby employers have been positioned as customers of the skill system with consumer rights rather than active participants with meaningful rights *and* responsibilities in the actual provision of E&T;
- capacity issues – lack of dedicated staff to drive meaningful collaboration between E&T and employers as well as high staff turnover mean there is no sustained support structure to ensure effective engagement;
- representation – all participants raised concerns about SMEs all too frequently being excluded from E&T discussions and activities, leading to unequal employer voice and representation within E&T.

This all points to a need for fresh thinking around employer engagement, introduction of appropriate policy structures to drive deeper engagement that shifts the focus from simply skills to demands to real engagement in the process of supply, and proper investment in support structures within E&T, including more dedicated employer engagement roles.

Need for demand side interventions

Employers, E&T providers and young people raised concerns about the quality of work and particularly the long-term nature of careers. Employers and providers in particular discussed the shifting skills needs in relation to technological advancements (AI and automation) and highlighted that not enough analysis had necessarily been done on what these changing skills needs mean for the long-term careers of individuals. They acknowledged that despite demanding specific kinds of technical skills and green skills, these often relate to specific jobs (e.g. heat pump engineer) tied to wider sector or governmental agendas (e.g. decarbonisation of buildings); only limited work has been done on defining the occupational structures associated with these jobs and agendas or how they might translate into meaningful work and attractive careers. These are things that young people described as being key to their aspirations. At the same time employers acknowledged that the may not always be using new skilled workers as effectively as they should be due to issues with working practices, low skill business models, and poor absorptive capacity.

This all points to the need for overt skills demand side interventions, linked with active employer engagement in the supply side of the skills system, focused on ensuring that occupations are redesigned in relation to changes in skills demands in a way that centres long term careers and meaningful work.

Pay and conditions for E&T staff

A recurrent theme, particularly highlighted by E&T providers, was the recruitment and retention of E&T staff. A major issue emphasised was the challenge of competing with pay and conditions in industry and so ensuring staff were high quality, adequately skilled, and understand industry need. This was acknowledged by employers as well, who highlighted that recruitment and retention issues undermined efforts to build meaningful relationships between employers and E&T and sat behind the skills gaps and shortages that beset a wide range of industries. There is

clearly critical work to be done on reviewing pay and conditions for staff, particularly in FE to develop a more stable E&T workforce.

Post-16 teaching, learning and curricula

Employers and young people raised concerns about the nature of teaching, learning and curricula in post-16 E&T. For employers, there was a consensus that current approaches were failing to meet their skills needs and address skills gaps and shortages. There was concern that certain technical skills were not being properly taught, there was a lack of broader employability skills being formed, and that teaching approaches were too theoretical and academic. Young people expressed concerns that they weren't necessarily getting the skills they needed for longer term careers and to navigate uncertain labour markets. E&T providers acknowledged a tension between meeting employers' skills demands (which often focused on short term job needs) and the longer-term career needs of young people. It was acknowledged that, to a certain extent, trying to find balance was a product of a marketized system with both employers and young people positioned as consumers of the skills system.

These issues point to a need for more systems thinking and stronger engagement from employers to help navigate potential competing tensions as described above. However, it also suggests a potential need to build general employability and transferable skills into vocational curricula and reflect on whether regulatory frameworks around qualifications are foregrounding academic modes of assessment in vocational pathways. This resonates with work by NFER on the Skills Imperative (https://www.nfer.ac.uk/key-topics-expertise/education-to-employment/the-skills-imperative-2035/publications/)

Access and Navigability of the system

A major issue raised by both employers and particularly young people was how hard post-16 E&T is to navigate. This was seen as impacting all parts of the UK. Different pathways were seen as confusing and young people felt they were provided with inadequate support in their schools for navigating the vocational pathways in post-16 E&T. Issues with apprenticeships were emphasised. Several young people highlighted that the English Government's 'find an apprenticeship' site (https://www.gov.uk/apply-apprenticeship) was difficult to use, required extensive knowledge of different employers before you can search, and only provided partial results. Young people described challenges in finding apprenticeships and needing to draw on social networks and contacts to find appropriate opportunities. Employers, particularly SMEs, expressed similar concerns at navigating the system, understanding policy, and working with the apprenticeship levy. Findings highlight a clear need for a much more coherent and accessible approach to post-16 E&T and much better support structures to help employers provide opportunities and young people navigate options and find positions.

Inequalities

In addition to emphasising challenges involved in navigating post-16 E&T pathways, the young people in this study also expressed a view that there were profound inequalities at the heart of the system, particularly in accessing apprenticeships. Young people felt that apprenticeships were now so competitive, particularly at higher levels, that those with better connections and economic advantages were more likely to access them. They highlighted a view that people with degrees were taking up apprentice positions and members of the existing workforce with much more experience were more likely to be given opportunities. Despite policy discourses about the potential opportunities associated with good vocational E&T, young people in this study expressed cynicism at this and described feeling that vocational opportunities were being 'stolen' from them by more advantaged peers and by an older generation. This suggests more work is needed on ensuring E&T pathways are accessible, potentially introducing regulation related to widening participation in higher level apprenticeships.

Recommendations

Based on these key findings, we suggest the following recommendations. These are particularly relevant to Westminster as the English government continues to develop its post-16 E&T strategy, but some recommendations will also be relevant to Northern Ireland, Scotland and Wales, particularly as they move forward in their tertiary agendas.

Recommendation 1: Move from competition to coordination

There is a clear trajectory towards holistic, tertiary education based policy making in Scotland, Wales and Northern Ireland as well as signals of interest from the English Government in a tertiary framing. This should involve an overt shift from market logic to systems thinking and a move from competition to coordination as the mechanism for driving quality, ensuring economic needs are met, and supporting individual career aspirations. This positions devolved governments as playing a coordinating role in the process of skills supply and demand in a way that links supply side initiatives and E&T strategy, with demand side interventions and industrial strategy.

Recommendation 2: Introduce a national tertiary framework for place-based implementation

Coordination should not involve centralisation. E&T is most effective when it is rooted in regional economic and social needs and fosters local collaborations between employers and providers. Therefore, a shift to coordination should involve the development of a regional framework that can be operationalised in a way that takes into account place-based needs, contextual factors, geographies, and existing relationships. This is likely to go beyond current approaches to devolution within the UK nations and will necessitate thinking through regional boundaries based

on existing relationships between FE, HE and employers. The process must avoid arbitrary separations or combinations of partners.

Recommendation 3: Develop better mechanisms for supporting meaningful employer engagement in E&T

This recommendation has three key parts:
- **Drive discursive shifts**: change the expectations placed upon employers to move them from consumers of the skills system to engaged stakeholders with rights *and* responsibilities through funding levers and incentives
- **Reform local structures**: reform LSIPs and local mechanisms that encourage collaboration between employers and E&T ensuring both stakeholders can engage in a meaningful way.
- **Invest in capacity**: provide funding to support dedicated staff, particularly in FE colleges to build local and sustained relationships with employers, cutting across multiple sectors, building on existing best practice in some parts of the sector.

Recommendation 4: Undertake an urgent review of pay and conditions for FE college staff

There is a clear urgent need to review pay and conditions for FE staff. There is significant disparity between FE staff and school teachers and poor comparison with industry salaries. This has resulted in long standing issues with recruitment and retention in the FE workforce, as highlighted by the IFS Spending Series on Education (https://ifs.org.uk/publications/annual-report-education-spending-england-2024-25) and the government's pledge to recruit 6,500 extra teachers (https://www.gov.uk/government/news/education-secretary-begins-push-to-recruit-6500-new-teachers). A review is required.

Recommendation 5: Explicitly build employability skills into post-16 curricula as part of the Curriculum and Assessment Review

Ironically, transferable employability skills appear to be overlooked in vocational E&T. They should be included in post-16 curricula and work should be undertaken to build evidence from FE on the best pedagogic approaches to ensure employability skills formation effectively takes place. This might be taken forward by the EEF as part of its post-16 agenda.

Recommendation 6: Develop stronger guidance tools for young people to find decent E&T opportunities, particularly apprenticeships and transition into vocational pathways from school

Young people have clearly described the challenge of navigating post-16 E&T, finding opportunities, particularly apprenticeships, and transitioning into vocational pathways, with limited support from school (see also work by the Careers and Enterprise Company - https://www.careersandenterprise.co.uk/evidence-and-reports/conditions-for-transition-

supporting-young-people-onto-apprenticeships-and-technical-pathways-a-regional-analysis/).
There is therefore an urgent need to improve career guidance on offer in schools, to improve the
technical systems that enable young people to find opportunities, to develop clearer signposting
for existing tools, and develop better support mechanisms for transition.

Recommendation 7: Conduct an urgent review of apprenticeship participation and introduce regulatory mechanisms to support fair access to apprenticeships

There is a clear danger that inequalities are increasingly embedded in post-16 E&T. There is
therefore an urgent need to review how inequalities are being shaped and introduce regulatory
mechanisms that support fair access to E&T opportunities, particularly apprenticeships. This
raises the question of whether a body like Skills England should have responsibility for fair
vocational access.